

Fig. 1
(Prior Art)

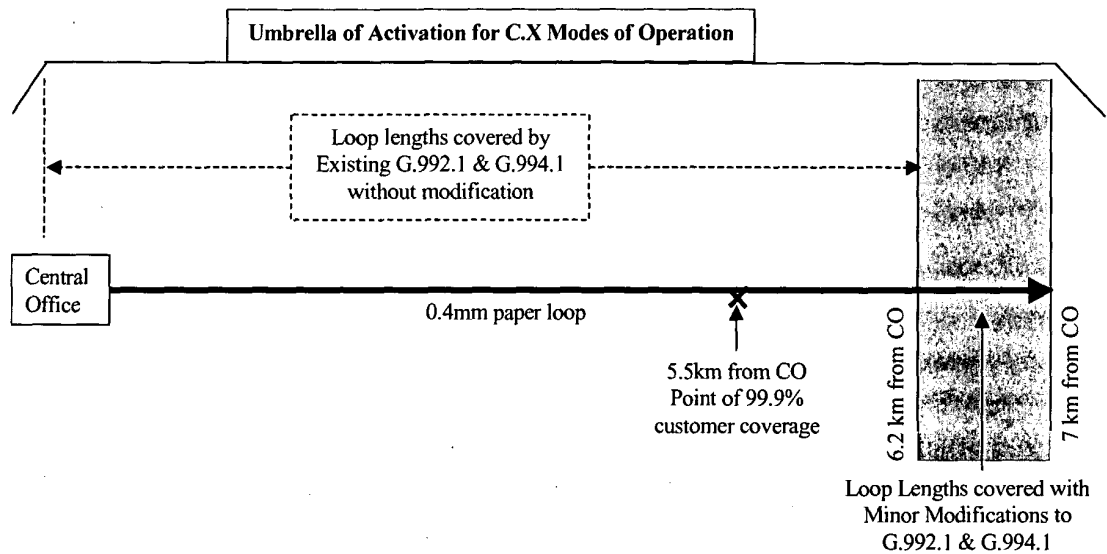
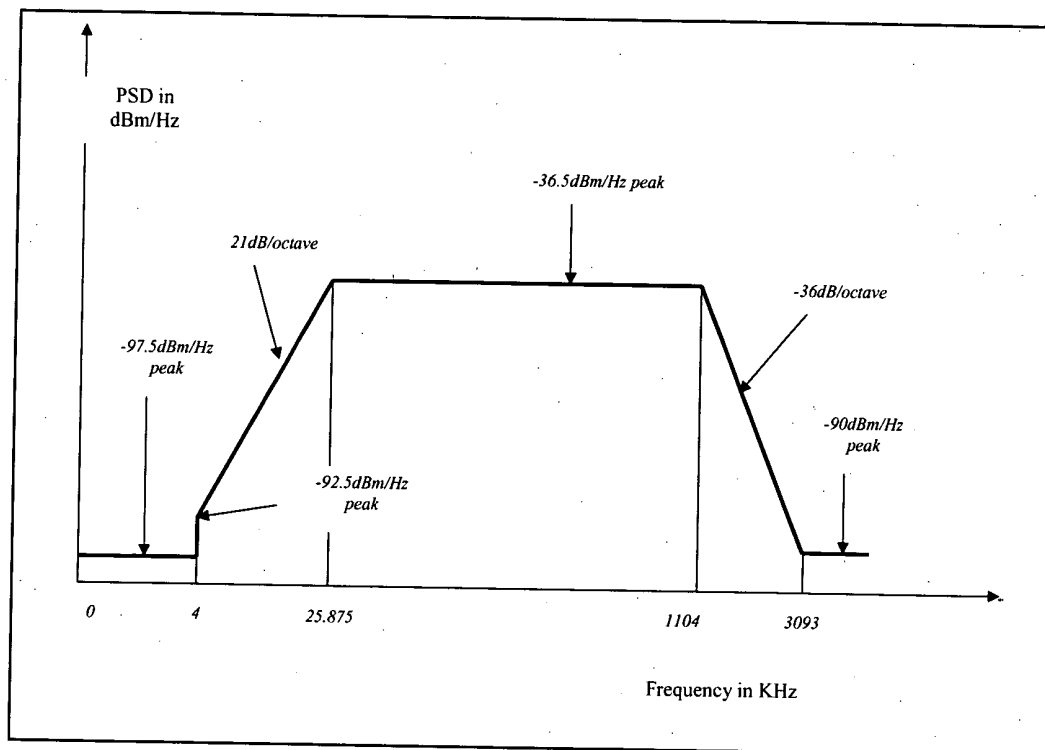
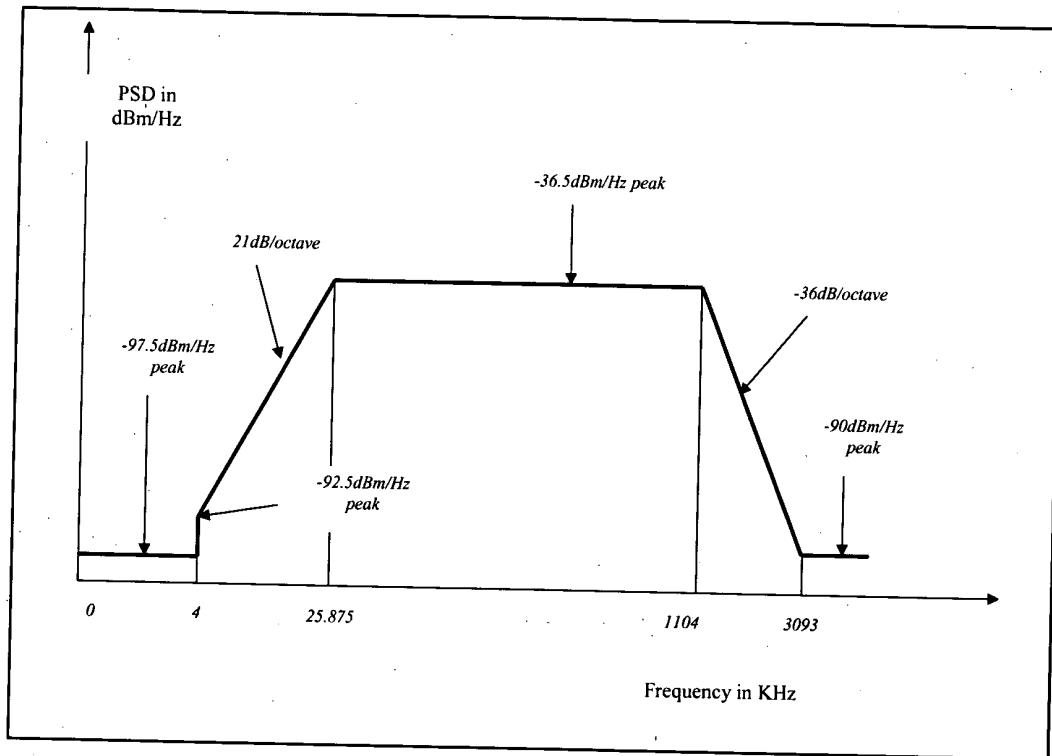


Fig. 2



DBMOL Downstream Spectral Mask

Fig. 3
(Prior Art)



AOL Downstream Spectral Mask

Fig. 4
(Prior Art)

TABLE 11: Spectral compatibility of A.X₂₄ with first group systems in G.992.1 mode

loop (km)	TCM-ISON				A.992.1				C DBM 992.1				C FBM 992.1			
	Ref table		U/S		Ref table		D/S		Ref table		U/S		Ref table		U/S	
	Ref table	144	832	832	5632	6752	832	832	832	6048	6752	288	288	2496	2496	D/S
0.5	144	144	832	832	5632	6752	832	832	832	6048	6752	288	288	2496	2496	
0.75	144	144	832	832	4032	5660	832	832	832	4960	6560	288	288	2432	2432	
1	144	144	800	832	2400	6144	800	832	832	3808	6144	288	288	2272	2272	
1.25	144	144	768	832	1504	5952	768	832	832	3168	5952	288	288	2208	2208	
1.5	144	144	704	800	960	5856	736	800	800	2784	5856	288	288	2144	2144	
1.75	144	144	640	800	608	5536	704	800	800	2432	5536	288	288	2048	2048	
2	144	144	576	768	384	5312	672	768	768	2208	5312	288	288	1952	1952	
2.25	144	144	512	736	192	4896	640	736	736	1984	4896	288	256	1792	1792	
2.5	144	144	448	704	96	4192	576	704	704	1664	4192	288	256	1536	1536	
2.75	144	144	352	672	32	3424	544	672	672	1344	3424	256	224	1248	1248	
3	0	0	288	608	0	2784	480	608	608	1120	2784	256	224	1024	1024	
3.25	0	0	256	576	0	2272	448	576	576	928	2272	256	192	832	832	
3.5	0	0	192	512	0	1792	416	512	512	800	1792	224	192	640	640	
3.75	0	0	160	448	0	1408	416	448	448	672	1408	224	160	512	512	
4	0	0	128	416	0	1024	384	416	416	512	1024	224	160	384	384	
4.25	0	0	96	384	0	736	352	384	384	416	736	192	128	256	256	
4.5	0	0	64	352	0	480	352	352	352	320	480	192	128	160	160	
4.75	0	0	64	320	0	288	352	320	320	256	288	192	96	96	96	
5	0	0	32	288	0	128	320	288	288	128	128	192	96	32	32	

Fig. 5

TABLE 12: Spectral compatibility of A.X₂₄ with first group systems in G992.2 mode

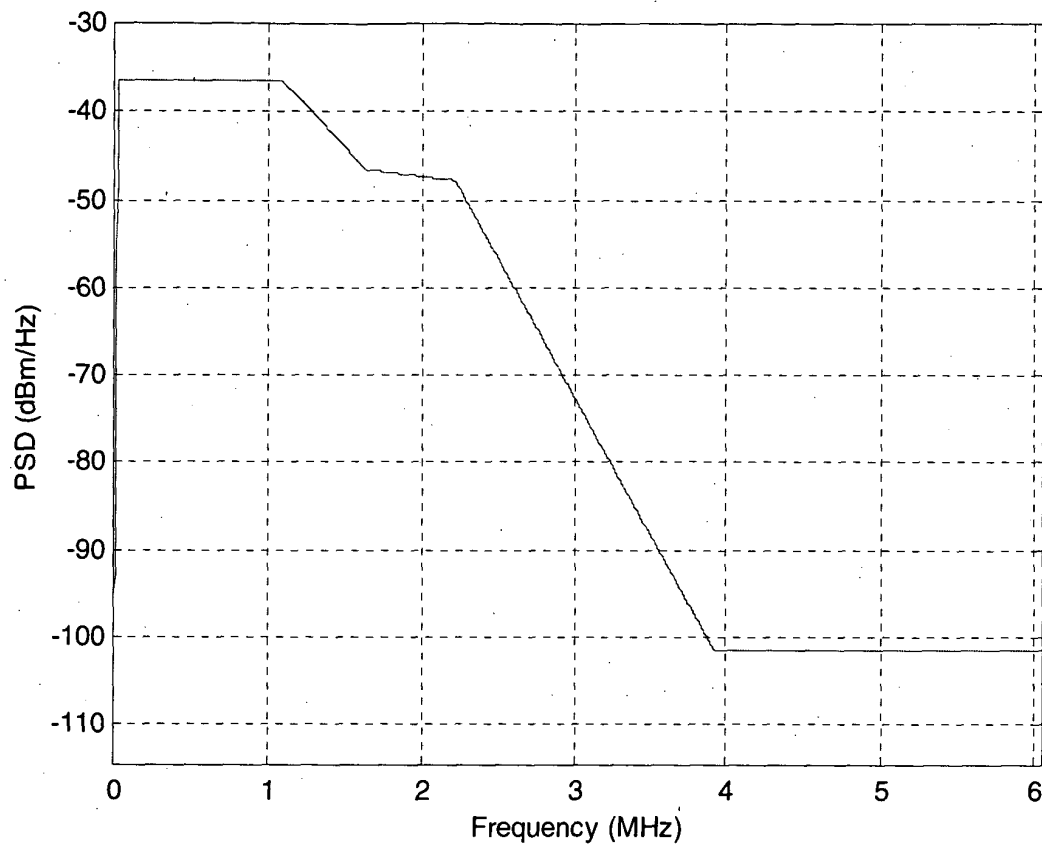
loop (km)	A 992.2			C DBM 992.2			C FBM 992.2		
	U/S	Ref table	D/S	U/S	Ref table	D/S	U/S	Ref table	D/S
0.5	832	832	2848	3008	832	832	288	1088	1088
0.75	832	832	2464	3008	832	832	288	1088	1088
1	800	832	2016	3008	800	832	288	1088	1088
1.25	768	832	1504	2944	768	832	288	1088	1088
1.5	704	800	960	2912	736	800	288	1056	1056
1.75	640	800	608	2848	704	800	288	1056	1056
2	576	768	288	2816	672	768	288	1024	1024
2.25	512	736	128	2752	640	736	256	1024	1024
2.5	448	704	64	2656	576	704	256	960	960
2.75	352	672	32	2560	544	672	224	928	928
3	288	608	0	2432	480	608	224	896	896
3.25	256	576	0	2240	448	576	192	832	832
3.5	192	512	0	1984	416	512	192	736	736
3.75	160	448	0	1632	416	448	160	576	576
4	128	416	0	1248	384	416	160	448	448
4.25	96	384	0	896	352	384	128	320	320
4.5	64	352	0	608	352	352	128	224	224
4.75	64	320	0	352	352	320	96	128	128
5	32	288	0	192	320	288	96	64	64

Fig. 6

TABLE 12: Spectral compatibility of A.X₁ with first group systems in G.992.1 mode

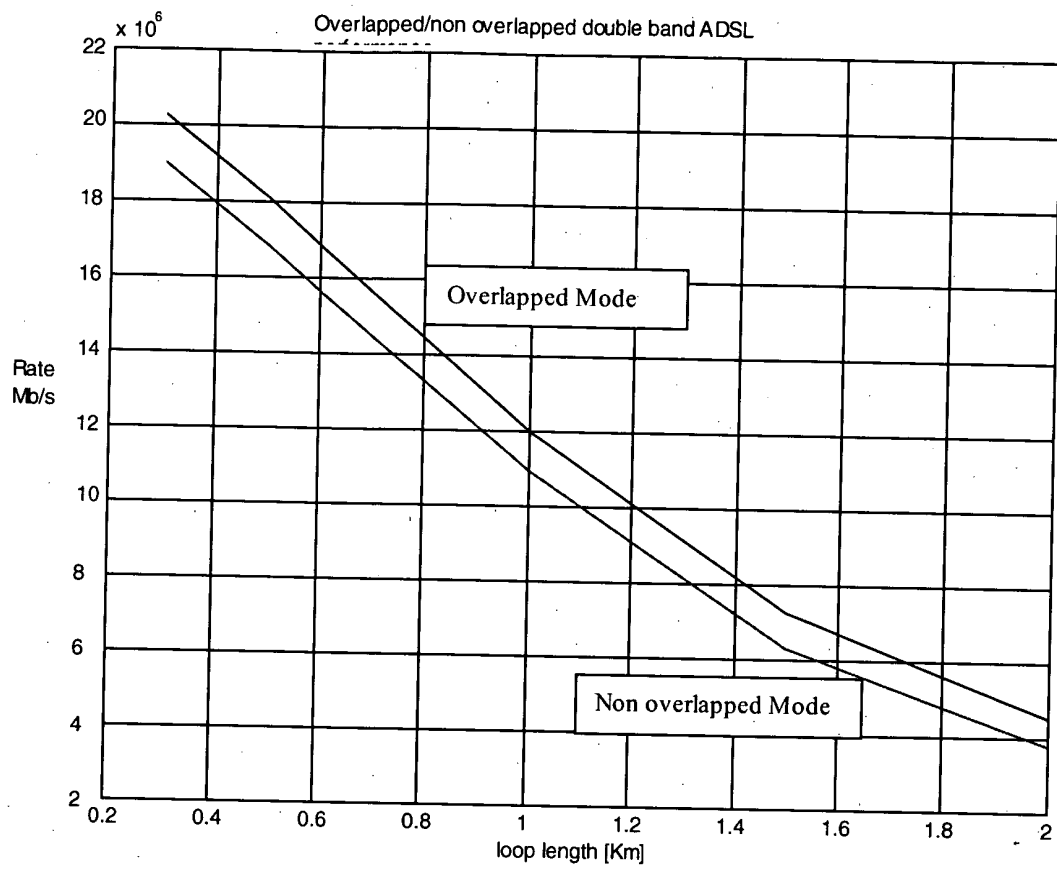
loop (km)	TCM-ISDN				A 992.1				C DBM/992.1				CFBM 992.1			
	Ref table	144	832	Ref table	U/S	Ref table	D/S	Ref table	U/S	Ref table	D/S	Ref table	U/S	Ref table	D/S	Ref table
0.5	144	144	832	5832	832	7104	7104	832	832	6048	7104	288	288	2496	2624	2624
0.75	144	144	832	4032	832	7104	7104	832	832	4960	7104	288	288	2432	2624	2624
1	144	144	800	2400	832	7104	7104	800	832	3808	7104	288	288	2272	2624	2624
1.25	144	144	768	1504	832	7104	7104	768	832	3168	7104	288	288	2208	2624	2624
1.5	144	144	704	960	832	7104	7104	736	832	2784	7104	288	288	2144	2624	2624
1.75	144	144	640	608	832	7104	7104	704	832	2432	7104	288	288	2048	2624	2624
2	144	144	576	384	832	6752	6752	672	832	1984	6752	288	288	1952	2496	2496
2.25	144	144	512	192	800	6112	6112	640	800	1664	6112	288	288	1792	2240	2240
2.5	144	144	448	96	800	5184	5184	576	800	1344	5184	288	288	1536	1920	1920
2.75	144	144	352	32	768	4224	4224	544	768	1024	4224	256	288	1248	1536	1536
3	0	144	288	0	736	3456	3456	480	736	832	3456	256	256	1024	1280	1280
3.25	0	144	256	0	704	2816	2816	448	704	800	2816	256	256	832	1024	1024
3.5	0	0	192	0	672	2240	2240	416	672	800	2240	224	224	640	832	832
3.75	0	0	160	0	608	1760	1760	384	608	672	1760	224	224	512	640	640
4	0	0	128	0	544	1344	1344	352	544	512	1344	224	192	384	480	480
4.25	0	0	96	0	512	928	928	320	512	416	928	192	192	256	352	352
4.5	0	0	64	0	448	640	640	320	448	320	640	192	160	160	224	224
4.75	0	0	64	0	416	384	384	352	416	256	384	192	160	96	128	128
5	0	0	32	0	384	192	192	320	384	128	192	192	128	32	64	64

Fig. 7



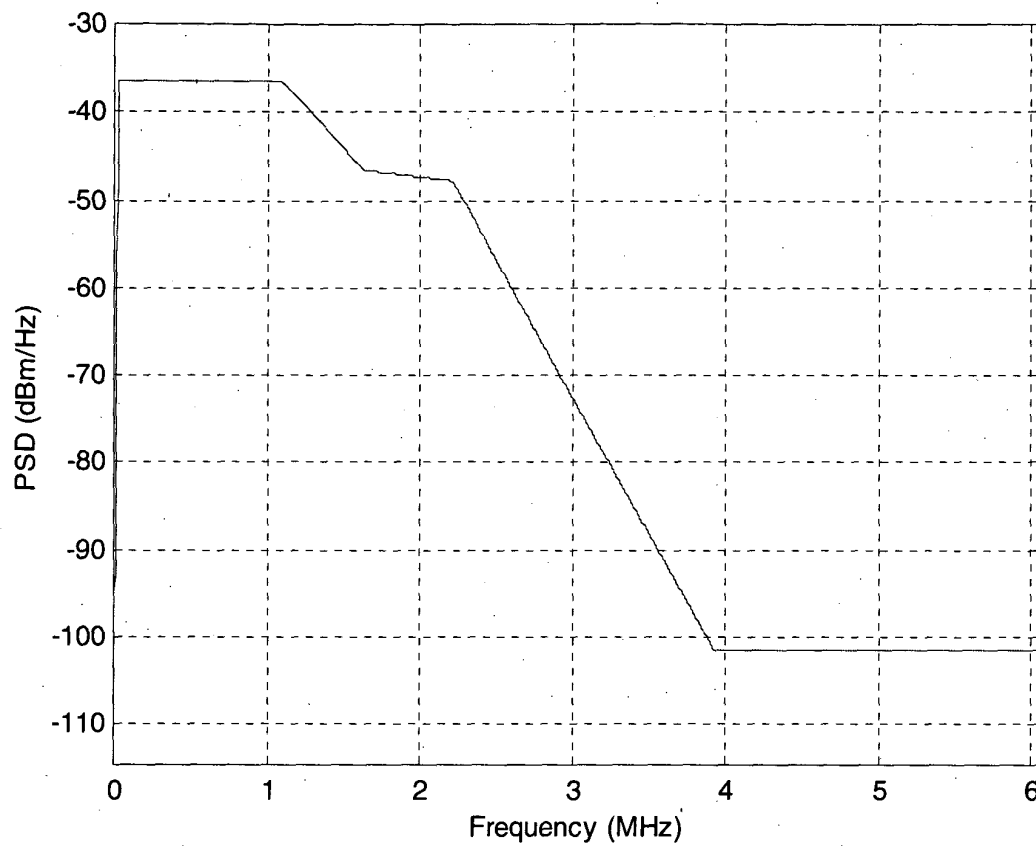
ADSL+ PSD for CO Deployment (Overlapped Mode)

Fig. 8



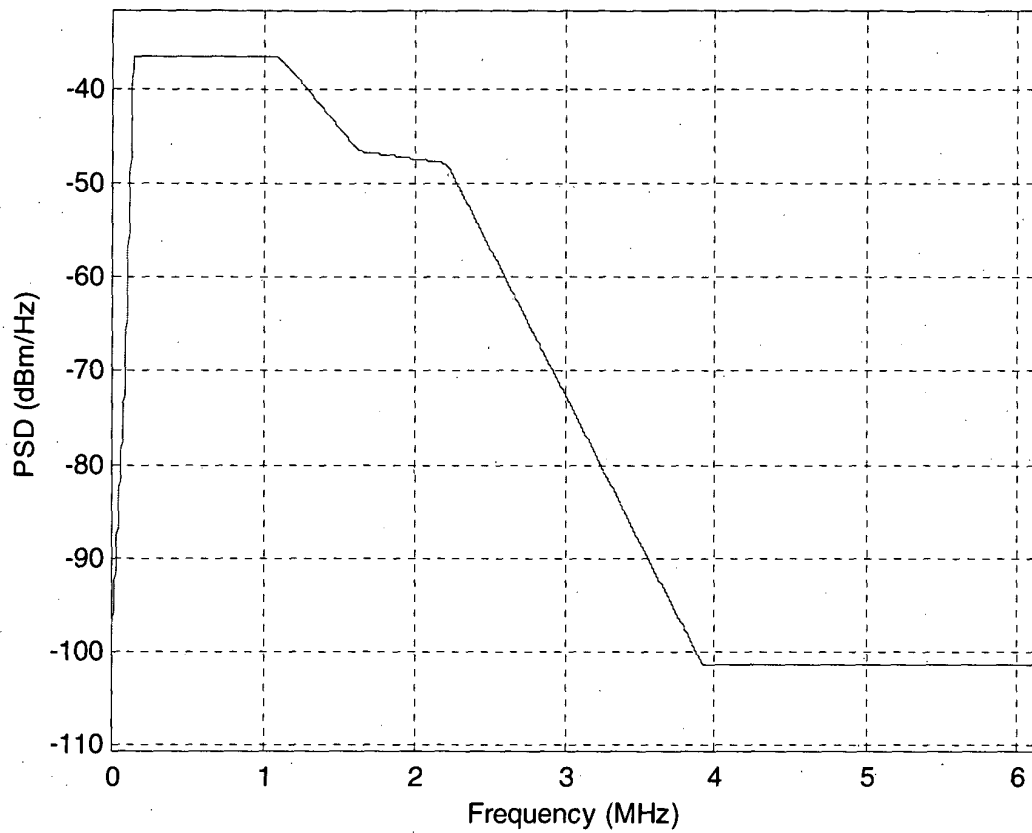
Performance for overlapped/non overlapped 2.208 MHz ADSL extended spectrum system

Fig. 9



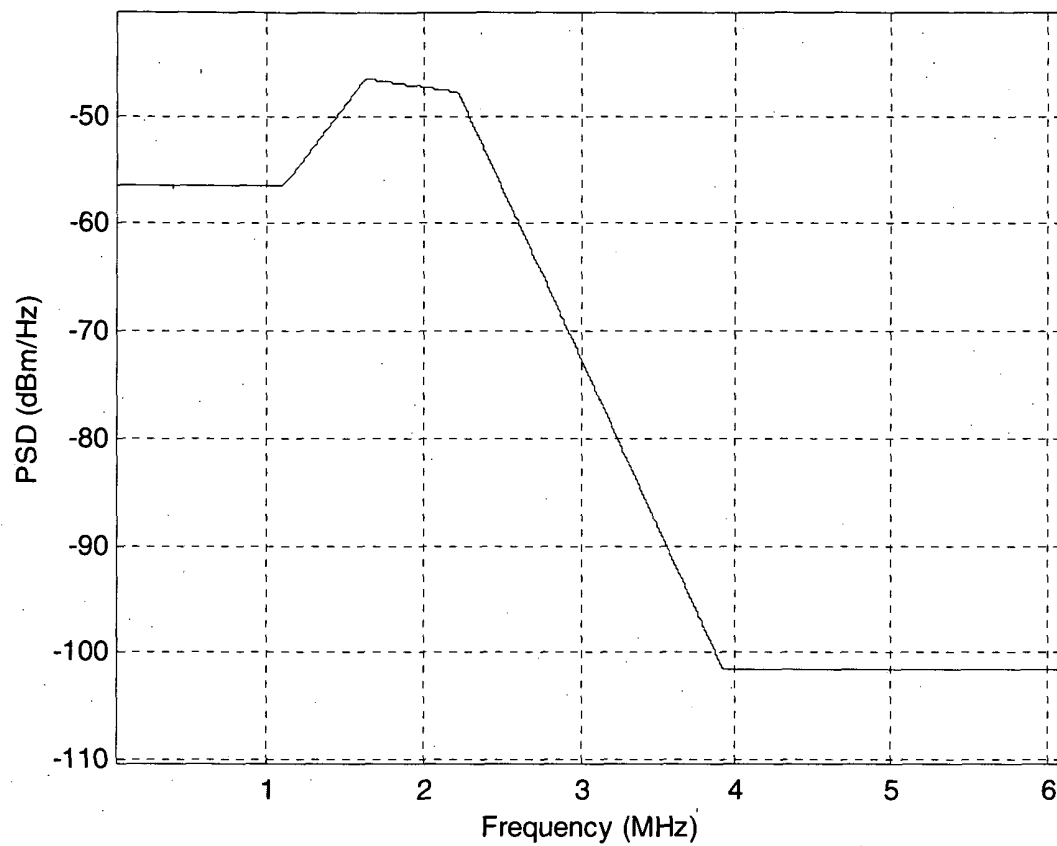
ADSL+ PSD for CO Deployment

Fig. 10



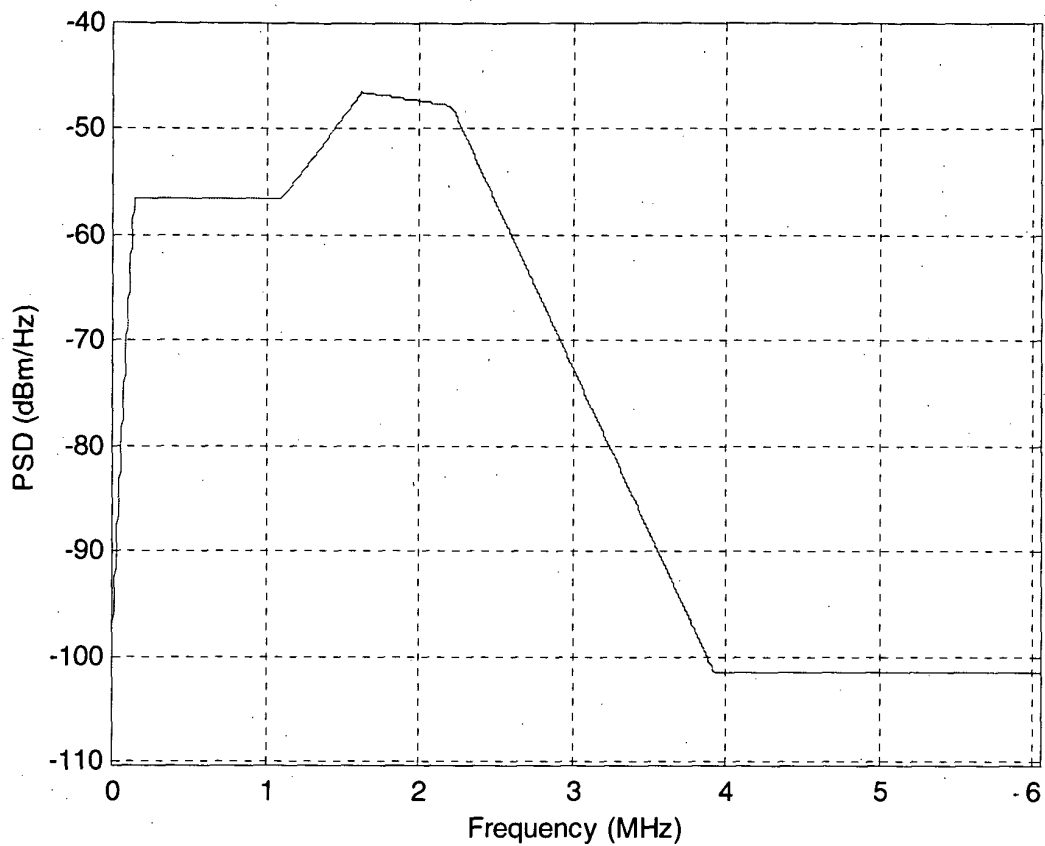
ADSL+ Over POTS PSD for CO Deployment (Non-Overlapped Mode)

Fig. 11



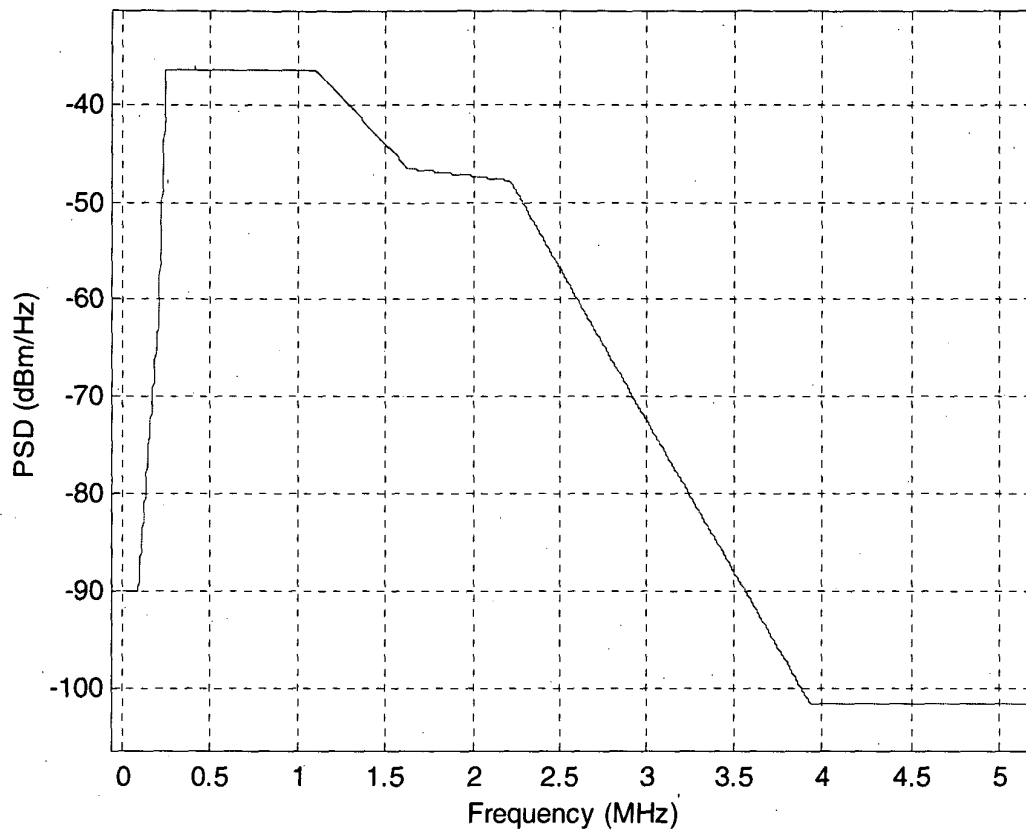
ADSL+ Over POTS PSD for CO Deployment (Non-Overlapped Mode)

Fig. 12



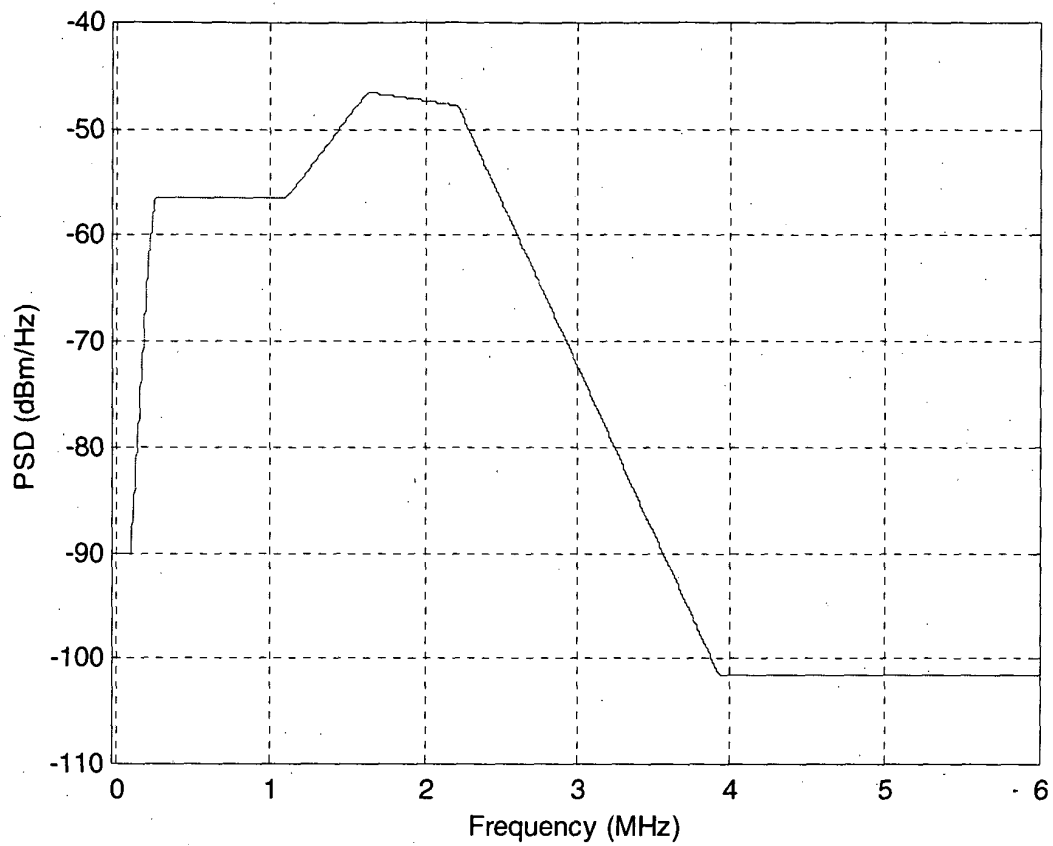
ADSL+ over POTS PSD for Cabinet Deployment (Non-Overlapped Mode)

Fig. 13



ADSL+ over ISDN PSD for CO Deployment

Fig. 14



ADSL+ over ISDN PSD for Cabinet Deployment

Fig. 15

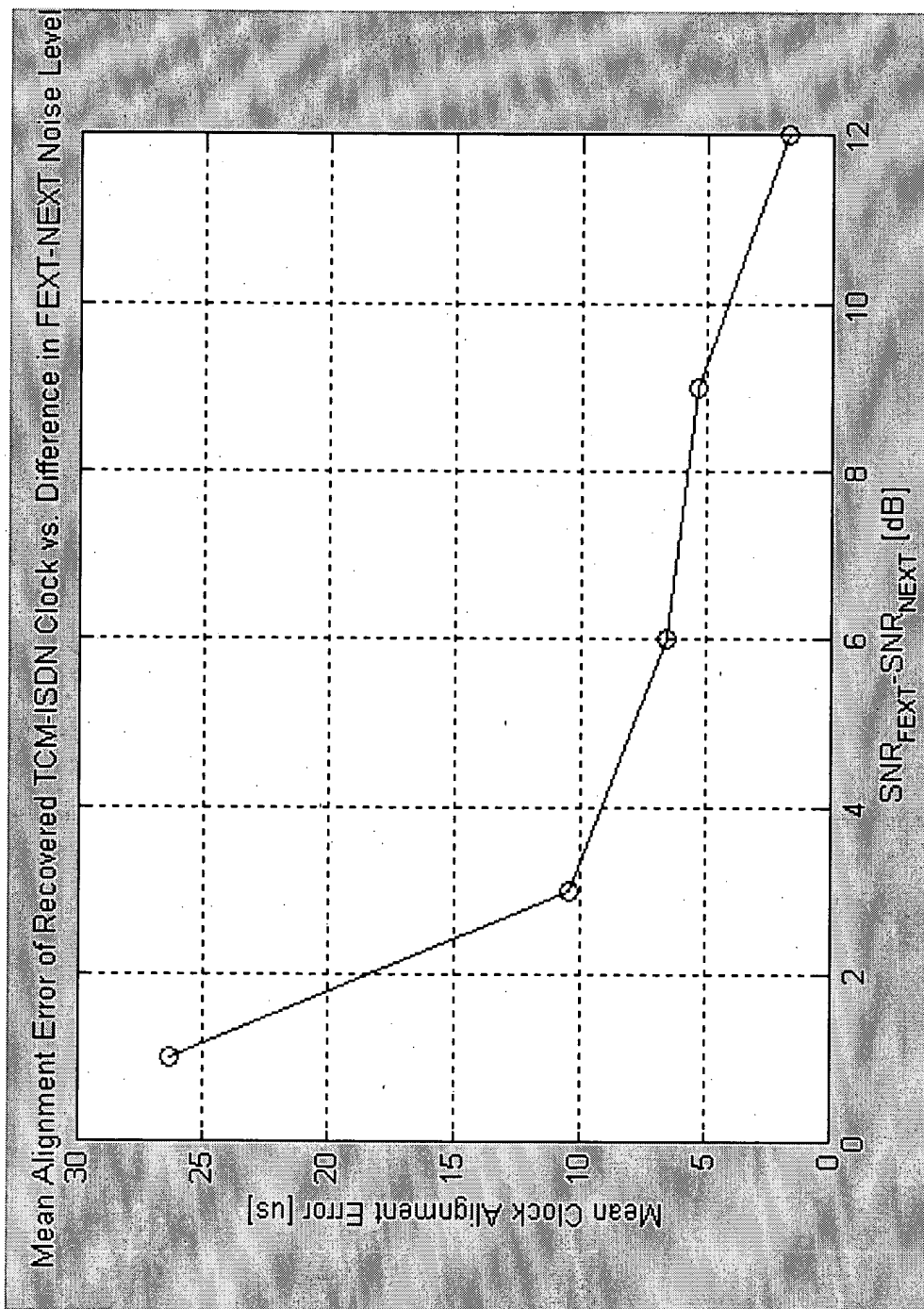


Fig. 16

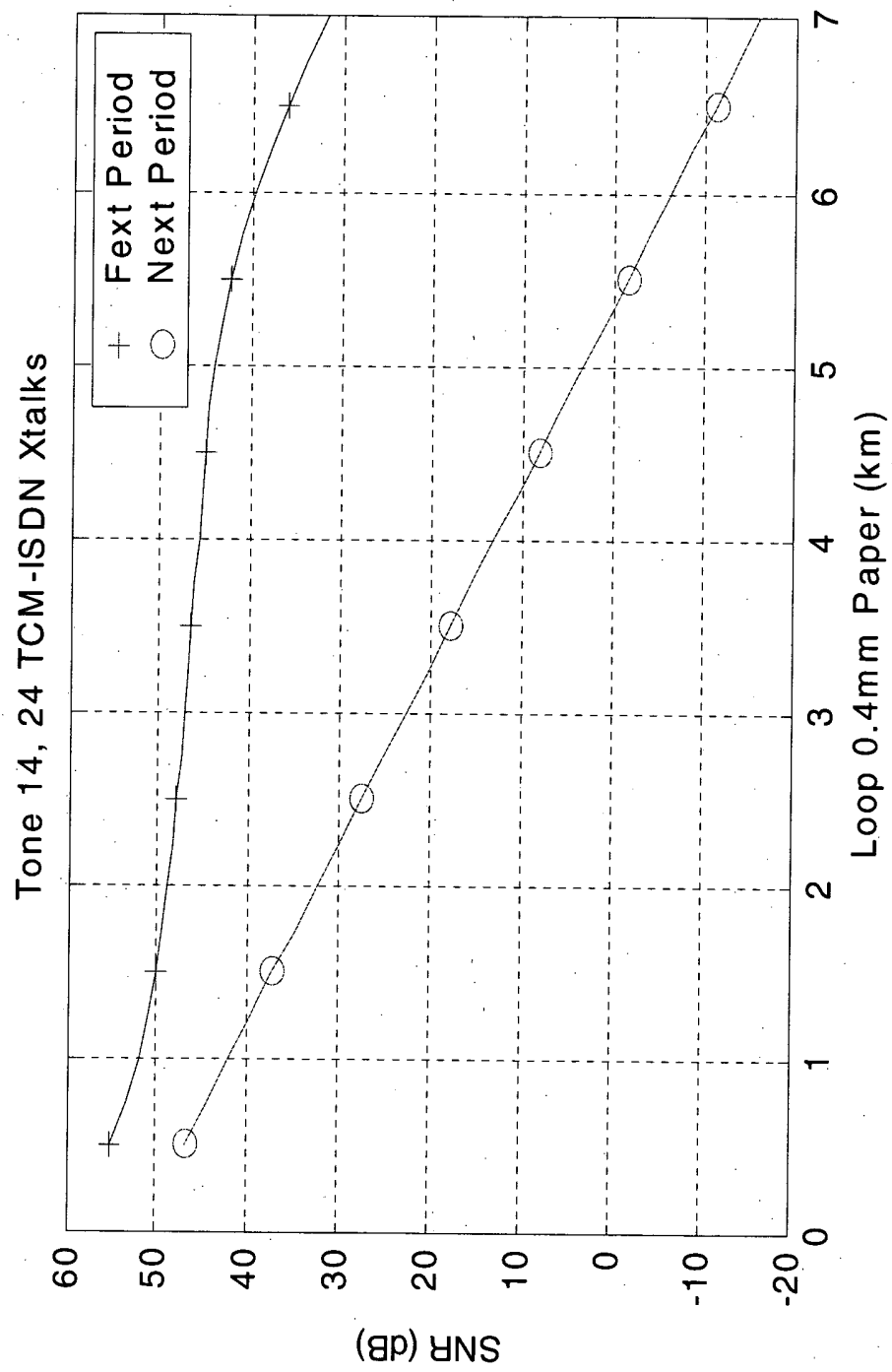
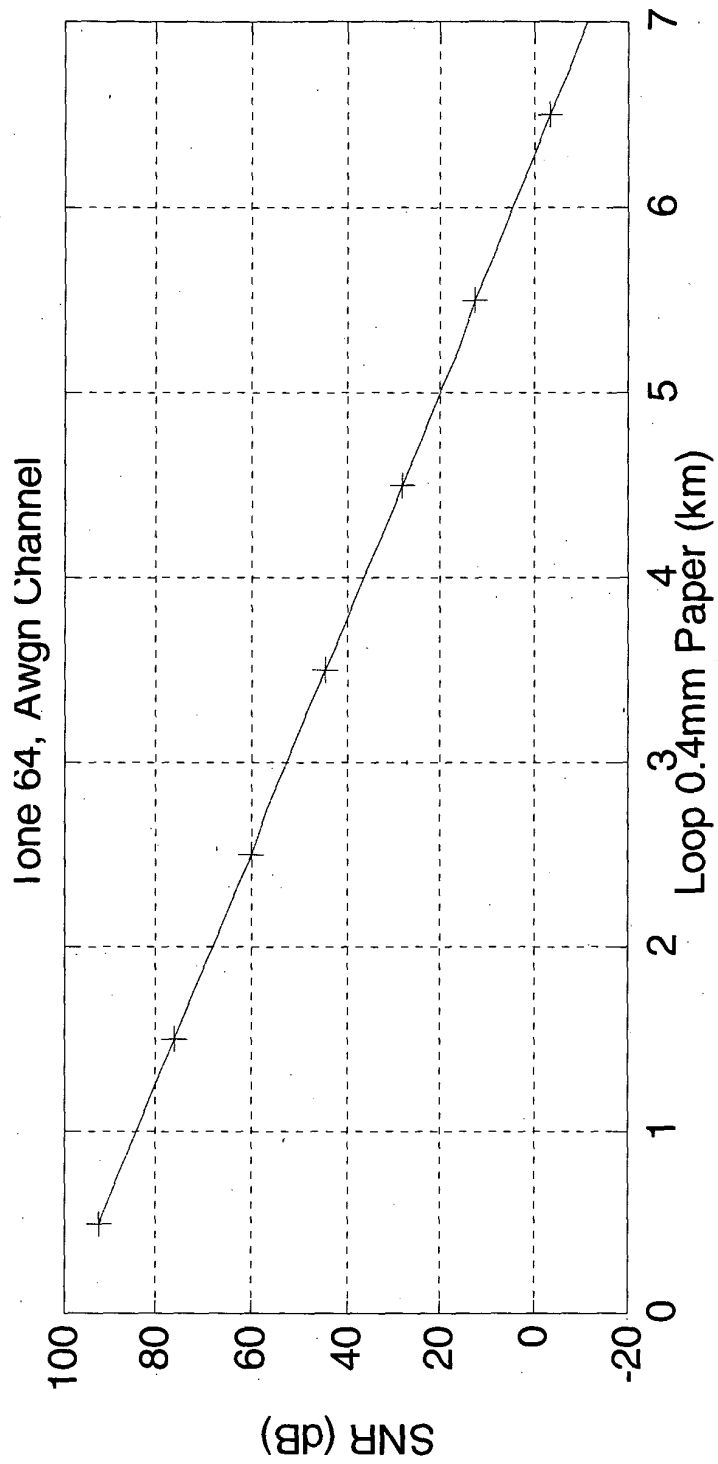
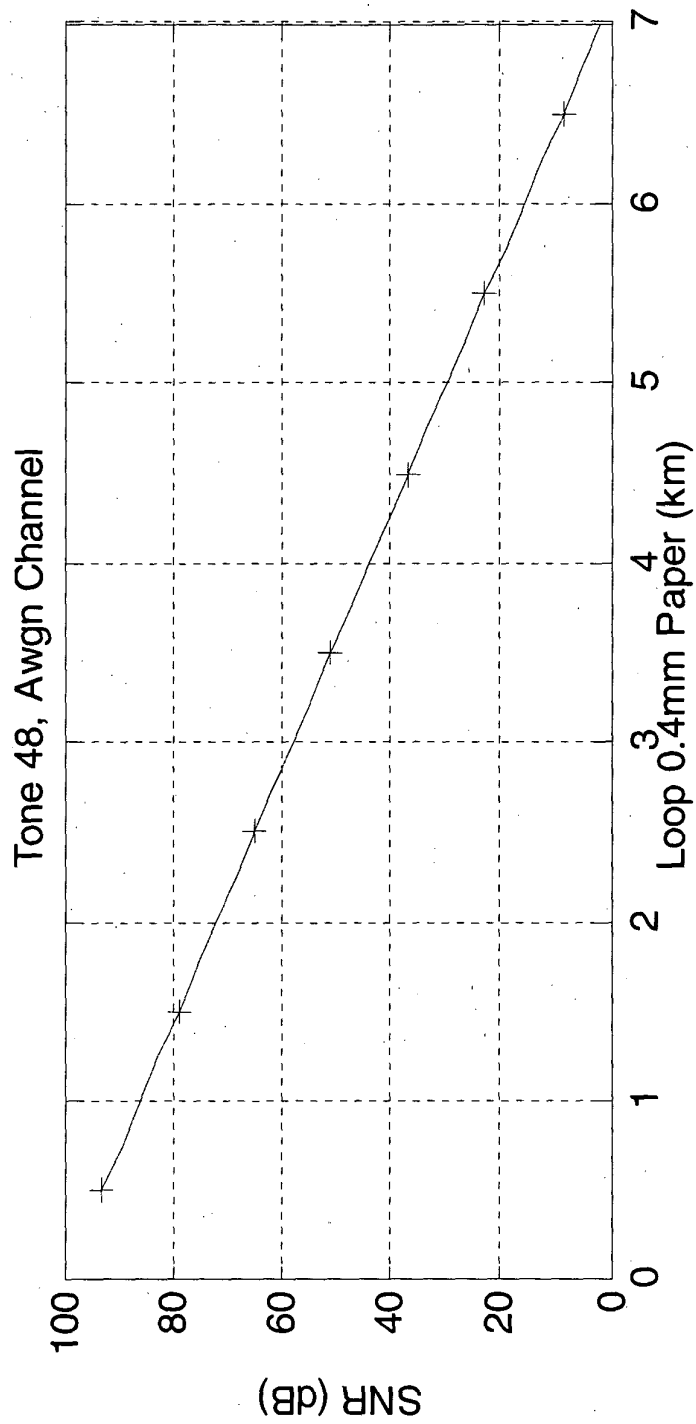


Fig. 17



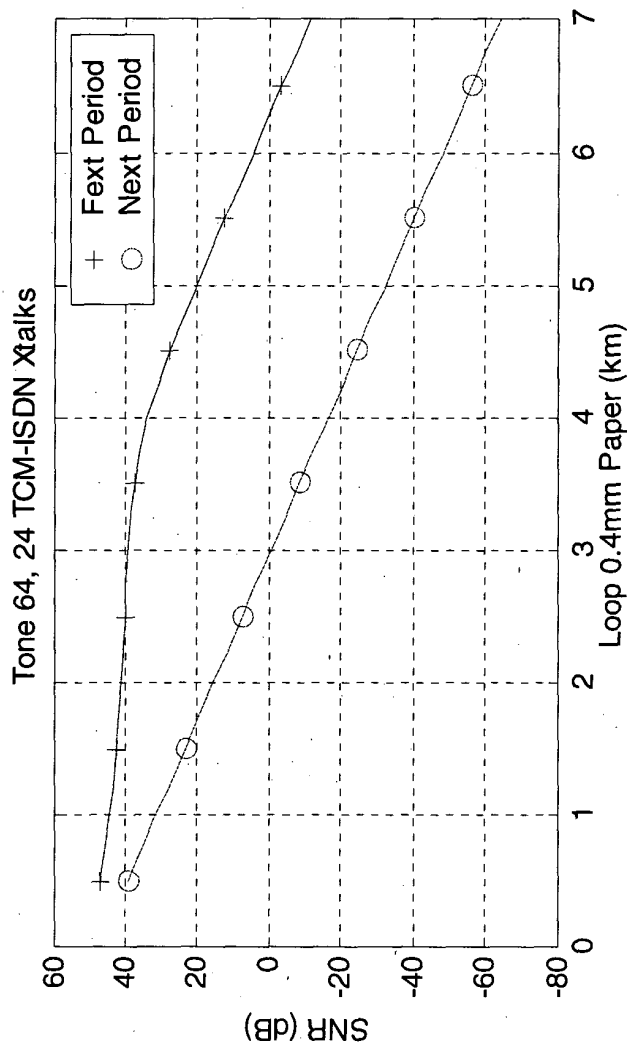
PILOT 64 SNR vs distance, -140dBm/Hz white noise

Fig. 18



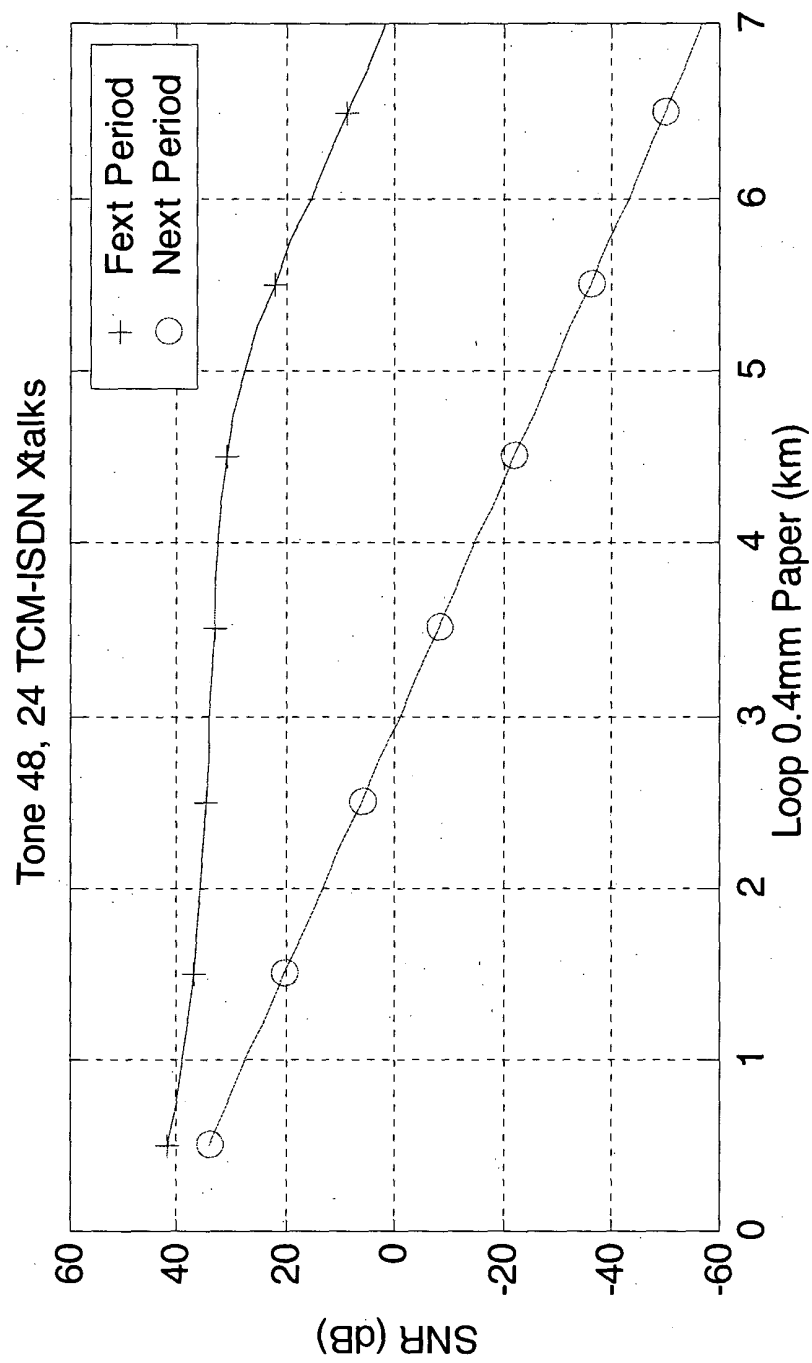
TTR 48 SNR vs distance, -140dBm/Hz white noise

Fig. 19



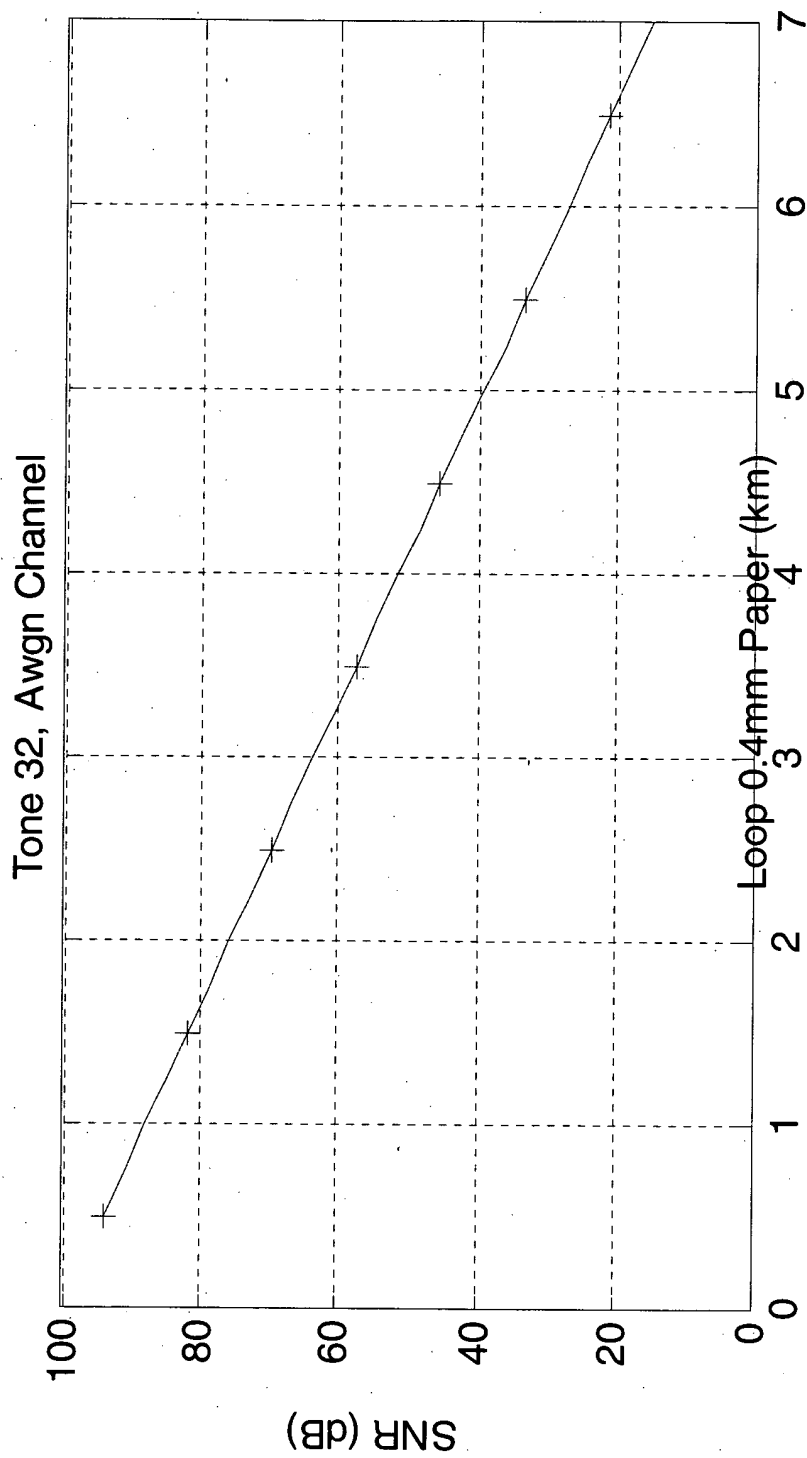
PILOT 64 SNR vs distance, 24 TCM-ISDN

Fig. 20



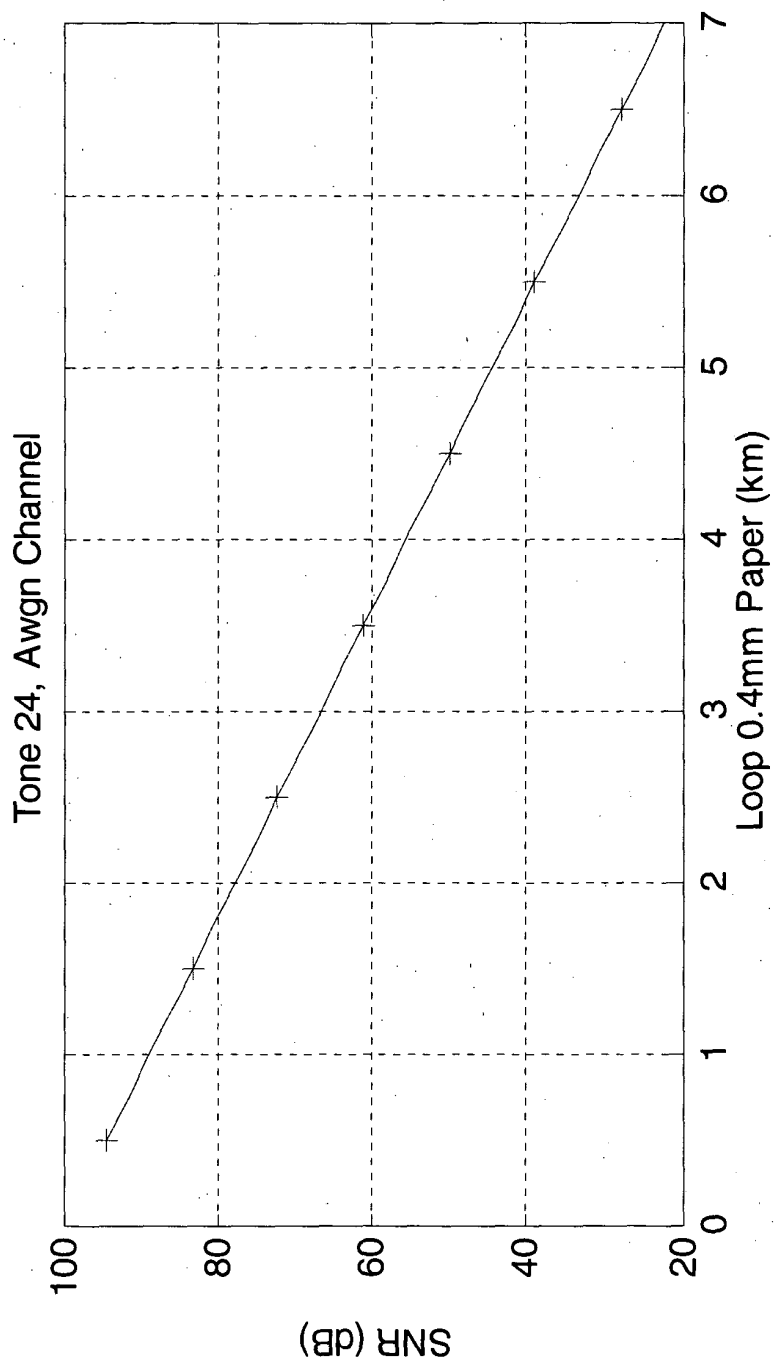
TTR 48 SNR vs distance, 24 TCM-ISDN

Fig. 21



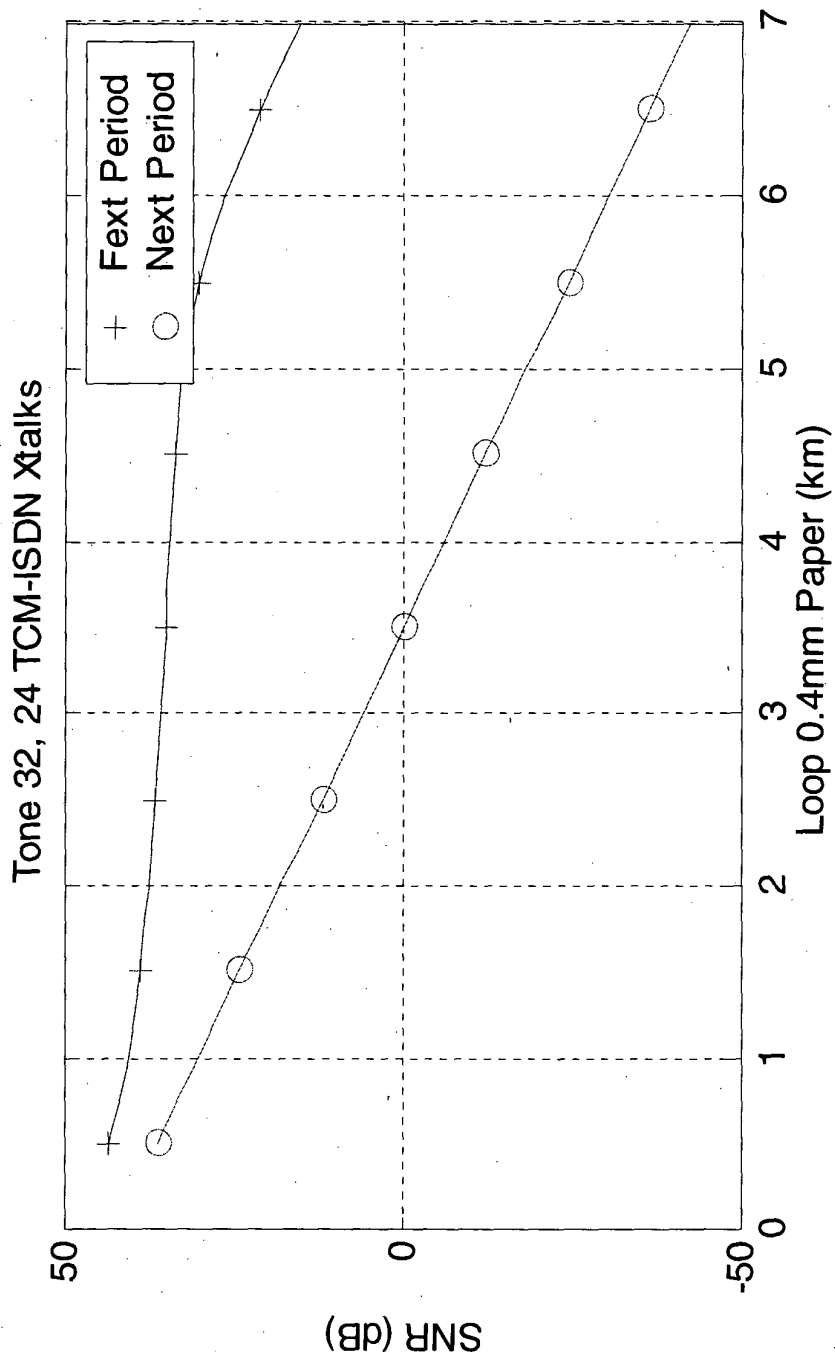
PILOT 32 SNR vs distance, -140dBm/Hz white noise

Fig. 22



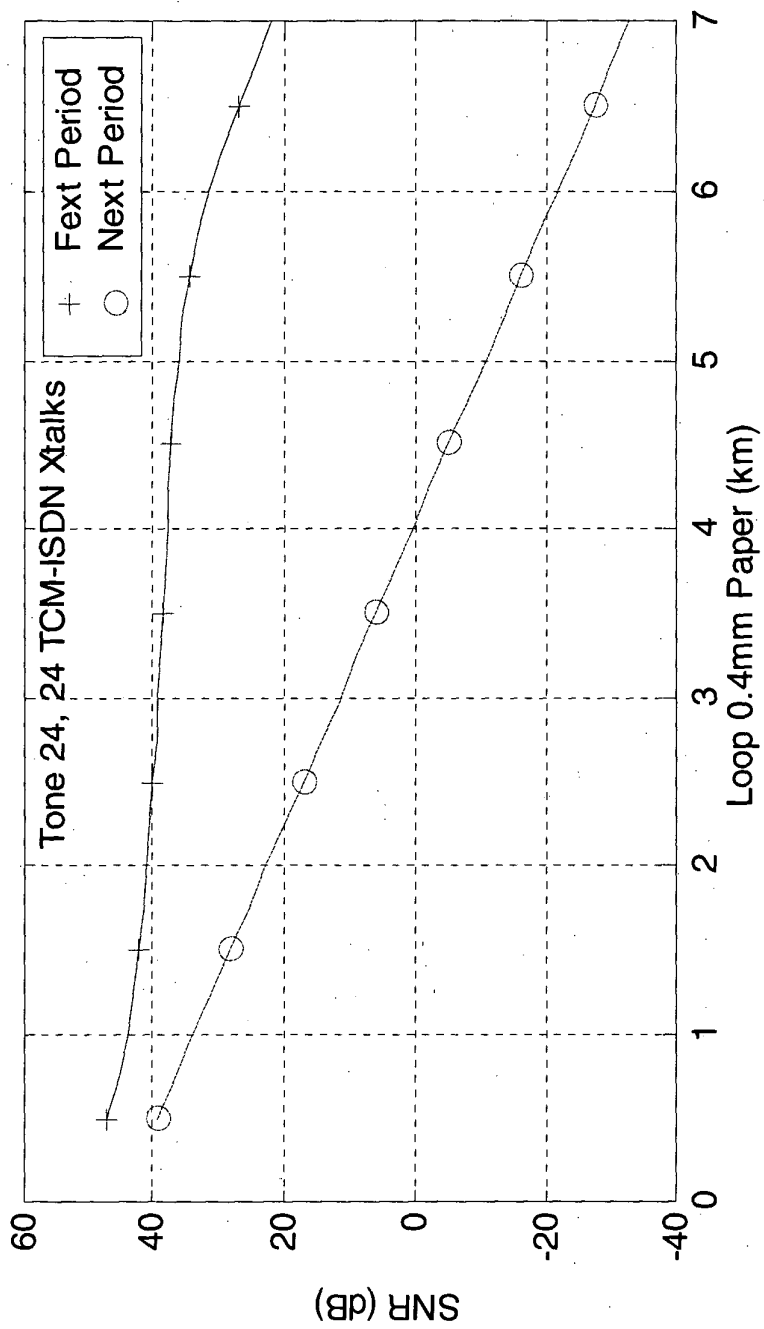
TTR 24 SNR vs distance, -140dBm/Hz white noise

Fig. 23



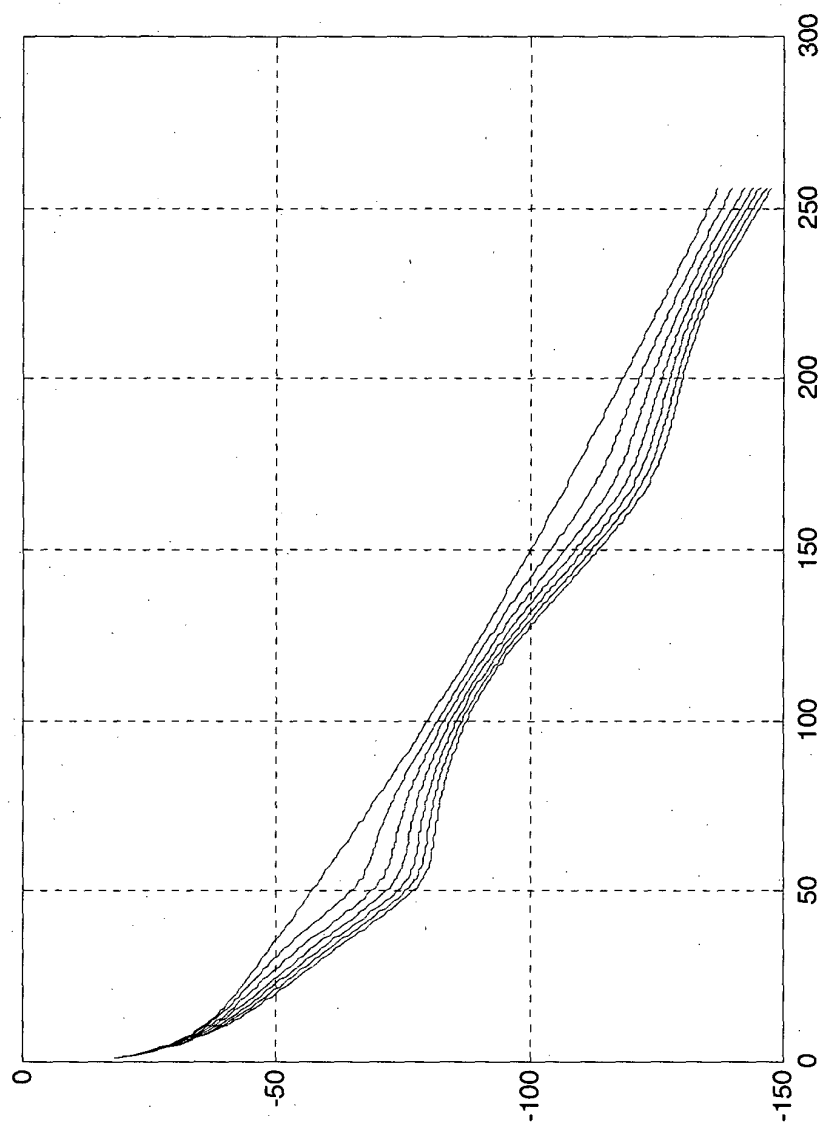
PILOT 32 SNR vs distance, 24 TCM-ISDN

Fig. 24



TTR 24 SNR vs distance, 24 TCM-ISDN

Fig. 25



Testing loops for PILOT 64 and TTR 48 Limitations in FDM Mode

Fig. 26